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FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO
09/26/2003	Yukihisa Takeuchi	789_117	9308
01/11/2006		EXAM	INER
VN		PERRY, AN	THONY T
13261-7068	OIPE	ART UNIT	PAPER NUMBER
	₹ \	2879	
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	09/26/2003 01/11/2006 VN	09/26/2003 Yukihisa Takeuchi 01/11/2006 VN 13261-7068	09/26/2003 Yukihisa Takeuchi 789_117 01/11/2006 EXAM PERRY, AN 13261-7068 ART UNIT 2879

Please find below and/or attached an Office communication concerning this application or proceeding.

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	Application No.	Applicant(s)	
Office Action Commence	10/671,763	TAKEUCHI ET AL.	Bur
Office Action Summary	Examiner	Art Unit	
	Anthony T. Perry	2879	
The MAILING DATE of this communication app Period for Reply	pears on the cover sheet with the c	correspondence address	
A SHORTENED STATUTORY PERIOD FOR REPLY WHICHEVER IS LONGER, FROM THE MAILING DOWN THE MAILING DOWN THE STATE After SIX (6) MONTHS from the mailing date of this communication. If NO period for reply is specified above, the maximum statutory period vortice for the provided period for reply within the set or extended period for reply will, by statute Any reply received by the Office later than three months after the mailing earned patent term adjustment. See 37 CFR 1.704(b).	ATE OF THIS COMMUNICATION 36(a). In no event, however, may a reply be tir will apply and will expire SIX (6) MONTHS from . cause the application to become ABANDONE	N. nely filed the mailing date of this communi D. (35 U.S.C. § 133).	
Status	•		
1)⊠ Responsive to communication(s) filed on 05 O	october 2005		
	action is non-final.		
3) Since this application is in condition for allowar		osecution as to the men	its is
closed in accordance with the practice under E			
Disposition of Claims			
4)⊠ Claim(s) <u>1-44</u> is/are pending in the application.			
4a) Of the above claim(s) 3,12-22,24 and 34-44		ation.	
5) Claim(s) is/are allowed.			
6) Claim(s) 1,4,5,7-11,23,26,27 and 29-33 is/are	rejected.		
7) \boxtimes Claim(s) 3.6.25 and 28 is/are objected to.			
8) Claim(s) are subject to restriction and/o	r election requirement.		
Application Papers	- "		
9) The specification is objected to by the Examine	er.	•	
10)⊠ The drawing(s) filed on 26 September 2003 is/a	•	ted to by the Examiner.	
Applicant may not request that any objection to the		•	
Replacement drawing sheet(s) including the correct	tion is required if the drawing(s) is ob	jected to. See 37 CFR 1.1	21(d).
11)☐ The oath or declaration is objected to by the Ex	caminer. Note the attached Office	Action or form PTO-15	2.
Priority under 35 U.S.C. § 119			
12)⊠ Acknowledgment is made of a claim for foreign a)⊠ All b)□ Some * c)□ None of:)-(d) or (f).	
1. Certified copies of the priority documents			
2. Certified copies of the priority documents			
3. Copies of the certified copies of the prior		ed in this National Stage	9
application from the International Bureau			
* See the attached detailed Office action for a list	of the certified copies not receive	ea.	
Attachment(s)			
Notice of References Cited (PTO-892)	4) Interview Summary		
2) Notice of Draftsperson's Patent Drawing Review (PTO-948) 3) Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date 9/26/03-9/01/05.	Paper No(s)/Mail Da 5) Notice of Informal F 6) Other:	ate Patent Application (PTO-152)	
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DETAILED ACTION

Claims 3, 12-22, 24, and 34-44 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 10/05/05.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 11, 23, and 33 are rejected under 35 U.S.C. 102(e) as being anticipated by Kastalsky et al. (US 6,614,149).

Regarding claims 1, 11, 23, and 33, Kastalsky et al. disclose a light emission device comprising an electric field receiving member (120) made of a dielectric material (glass substrate), which is an electrostricitve material (see Fig. 1b). The device has a first electrode (140) and a second electrode (310) on the upper surface of the field receiving member (120), wherein the two electrodes define a slit. The second electrode (310) has a fluorescent layer (195) disposed on it. Kastalsky teaches a display that uses a two-dimensional array of the light emission devices (see for example claim 18).

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 7-10 and 29-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149).

Regarding claims 7-10 and 29-32, Kastalsky discloses the claimed invention except for the specifically reciting the range for the width of the slit. It has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233. Furthermore, Kastalsky teaches that the width of the gap between the emitter (140) and the electrode (110) is preferably in a range of 1 micron or less so as to be able to reduce the voltage required to drive the device (see for example col. 3, lines 28-32). Accordingly, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a range for the width of the slit between the first electrode (140) and the second electrode (310), since optimization of workable ranges is considered within the skill of the art, and Kastalsky teaches minimizing the width of the slit allows for a low voltage difference between the electrodes.

Claims 4 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149) in view of Shibata (US 6,586,872).

Regarding claims 4 and 26, Kastalsky does not specifically teach the first electrode or second electrode having a concavity or convexity. However, Shibata teaches the first electrode

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being convex in shape and the second electrode being concave in shape (see Fig. 2c). This type of configuration is well known in the art and is used often as a way to increase the surface area of the opposing electrodes so as to provide a larger area for electron emission. Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have provided the first electrode with a convex shape and the second electrode with a concave shape so as to increase the electron emission efficiency of the device.

Claims 5 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149).

Regarding claims 5 and 27, Kastalsky teaches a land (110) disposed in the slit in such that it is electrically insulated in relation to the first electrode (140) and second electrode (310). Kastalsky teaches that the land (110) and the second electrode (310) being formed of the same conductive material, for example, aluminum (See for example col. 2, lines 52-59). Kastalsky does not specifically recite the material of the layer (160) of the first electrode (the emitter). Kastalsky simply refers to it as a conductive layer. It would have been obvious to one of ordinary skill in the art to have used the same material, for example, aluminum, for the all three conductive layers so that can be formed by a single printing process with the use of a mask.

Claims 5 and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kastalsky et al. (US 6,614,149) in view of Sasaguri (US6,583,553).

Regarding claims 5 and 27, Kastalsky does not specifically teach a pinhole defined in one of the first and second electrodes. However, Sasaguri teaches a pinhole (7) defined in the first electrode (4) (see Fig. 16B). Sasaguri teaches that by providing the pinhole in the electrode that the electron emission efficiency can be increased (see for example col. 14, lines 40-53).

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Accordingly, it would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a pinhole in the first electrode of the Kastalsky device in order to increase the electron emission efficiency of the device.

Allowable Subject Matter

Claims 3, 6, 25, and 28 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

Prior art fails to disclose or fairly suggest:

- The electric field receiving member having a dielectric constant of more than 1000, in combination with the remaining claimed limitations as called for in claim 3 and 25;
- One of the first electrode and second electrode having a circular shape and the
 other having an annular shape wherein the slit formed between them has annular
 shape in combination with the remaining claimed limitations as called for in claim
 6 and 28.

Contact Information

Any inquiry concerning this communication or earlier communications from the examiner should be directed to *Anthony Perry* whose telephone number is **(571) 272-2459**. The examiner can normally be reached between the hours of 9:00AM to 5:30PM Monday thru Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nimesh Patel, can be reached on (571) 272-24597. The fax phone number for this Group is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toII-free).

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Anthony Perry Patent Examiner Art Unit 2879 January 9, 2006 Mariceli Santiago Primary Examiner Art Unit 2879

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^{*}In accordance with the Notice dated July 11, 2003 on the PTO website, we are not enclosing copies of any of the above U.S. references.

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Exam. Initial		Document Number	Date	Name	Our Docket No.	Class	Sub Class	Filing Date
AN	BI	5,508,590	04/16/1996	Sampayan et al.				
Ang	ВЈ	5,453,661	09/26/1995	Auciello et al.				
Arr	вк	6,157,145	12/5/2000	Vollkommer et al.				

U.S. COPENDING APPLICATIONS

Exam, Initial		Application/ Publication Number	Filing/ Publication Date	Inventor Name	Our Docket No.	Class	Sub Class
AN	BL	10/719,521	11/21/2003	Takeuchi et al.	789_120		
MY	ВМ	10/719,596	11/21/2003	Takeuchi et al.	<u>.</u> 789 121		
AN	BN	10/730,754	12/08/2003	Takeuchi et al.	789_118 CIP		
ATP	во	10/731,901	12/09/2003	Takeuchi et al.	789 122		

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Sub Class	Translation	Abstract
ATY	BP	3833604	04/05/1990	DE			~	
ATT	BQ	2639151	05/18/1990	FR			~	
An	BR	428853	05/29/1991	EP			~	

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages etc.)

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ATP	DC	10/951,	,509	09/2	28/2004	Ta	akeuch	hi et al.		789	118 CIP3	3		
ATP	DD	10/950,	0.976	09/	27/2004	Ta	akeuch	ni et al.		789	118 CIP6	6		
ATP	DE	10/952,			28/2004		akeuch	•			89_135			
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*In accordance with the Notice signed September 21, 2004 on the PTO website, we are not enclosing copies of any of the above U.S. references or copending applications filed on or after June 30, 2003.

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U.S. COPENDING APPLICATIONS

Exem. Initial		Application/ Publication Number	Filing/ Publication Date	Inventor Name	Our Docket No.	Class	Sub Class
499	ВА	10/374,955	02/25/2003	Takeuchi et al.	789_105		
ATT	вв	10/459,415	06/11/2003	Takeuchi et al.	789_108 CIP		
APP	вс	10/459,110	06/11/2003	Takeuchi et al.	789_109 CIP		
42	BD	10/459,416	06/11/2003	Takeuchi et al.	789_110 CIP		
MY	BE	10/459,386	06/11/2003	Takeuchi et al.	789_111 CIP		
ATY	BF	10/647,794	08/25/2003	Takeuchi et al.	789_115		
AN	BG	10/673,384	09/26/2003	Takeuchi et al.	789_116		
AN	вн	10/699,186	10/31/2003	Takeuchi et al.	789_119		
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OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages etc.)

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Exem. Initial	Document Number	Date Name		Our Docket No.	Class	Sub Class	Filing Date
ATP	5,874,802	02-23-1999	Choi et al.)	
ATP	2002/0153827	10-24-2002	Takeuchi et al.				

FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	Sub Class	Translation	Abstract
AN	AA	1-311533 A	12-15-1989	JP	1			٧
M	AB	7-147131 A	06-06-1995	JP			IPO Machine Translation	V
	AC	2000-285801 A	10-13-2000	JP			JPO Machine Translation	V
	AD	46-20944	06-12-1971	JР			V	
	AE	44-26125	11-04-1969	JP			V	
	AF	11-185600	07-09-1999	JP			JPO Machine Translation	V
	AG	10-27539 A	01-27-1998	JР			JPO Machine Translation	~
	AH	11-288249 A	10-19-1999	JP			JPO Machine Translation	V
	AI	63-150837 A	06-23-1988	JP				V
	AJ	09-090882 A	04-04-1997	JP			IPO Machine Translation	~
	AK	59-208587	11-26-1984	JP			Partial	
	AL	3160213 B2	02-16-2001	JP			JPO Machino Translation	V
	AM	0 953 958 A2	11-03-1999	EP				
Į,	AN	2000-310970 A	11-07-2000	jp	14		JPO Machine Translation	V
ATP	AO	02/052600 A1	07-04-2002	wo				

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	 			-		

OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages etc.)

AN	AP	"Pulsed Electron Source Using a Ferroelectric Cathode," Tokyo Institute of Technology, Vol. 68, No. 5, 7 January 1999, pp. 546-550.
ATT	AQ	Puchkarev, Victor F. and Mesyats, Gennady A., "On the Mechanism of Emission from the Ferroelectric Ceramic Cathode," Journal of Applied Physics, Vol. 78, No. 9, 1 November 1995, pp. 5633-5637.
ATV	AR	Riege, H., "Electron Emission from Ferroelectrics - a Review," Nucl. Instr. and Meth. A340, 1994, pp. 80-89.
ATI	AS	Masatoshi Miyake et al., "Electron Emission from Ferroelectric Cathodes Excited by Pulsed Voltage," Tokyo Institute of Technology, Vol. 119, No. 5, 1999 pp. 622-627.

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ATP	DG	5,343,	,052	08/30	/1994	Oohata et al.				·				
MIL	DH	5,631	,524	05/20	/1997									
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#### FOREIGN PATENT DOCUMENTS

	Document Number	Date	Country	Class	Sub Class	Translation	Abstract
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#### OTHER DOCUMENTS

(Including Author, Title, Date, Pertinent Pages etc.)

ATY	DB	Kanemaru, Seigou, "Featuring: All About Flat Displays 2000, Leading Technological Trend of FEDs," Electronic Engineering, Nikkan Kogyo Shimbun, Ltd., July 2000, pp. 38-41 (with partial translation).

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Į.	M	co	2002/	/0060516 A1	05/23/	2002	Kawate et al	•						, ,		
L	1	CP	6,580	,108 B1	06/17/	2003	Utsumi et al									
L		cq	6,452	,328 B1	09/17/	2002	Saito et al.			•						
		CR	6,469	,452 B2	10/22/	2002	Seo et al.									
		CS	6,359	,383 B1	03/19/	······································		Chuang et al.								
		СТ	6,274	,881 B1	08/14/			al.								
		CU	6,184	,612 B1	02/06/	2001	Negishi et al									
		CV	6,153	,978	11/28/	2000	Okamoto									
		CW	6,040	,973	03/21/	2000	Okamoto et									
Ц		CX	5,990	,605	11/23/	1999	Yoshikawa e	t al.								
		CY	5,877	,594	03/02/	1999	Miyano et al	l <b>.</b>								
L	<u></u>	CZ	5,729	,094	03/17/	1998	Geis et al.									
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#### FOREIGN PATENT DOCUMENTS

-		Document Number	Date	Country	Class	Sub Class	Translation	Abstract
ATP	CF	3214256	7/27/2001	JP			Complete English Translation	

# OTHER DOCUMENTS (Including Author, Title, Date, Pertinent Pages etc.)

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Sheet	1	of	I	Attorney Docket No.	789_117	

Exam. Initial		Document Number	Date	Name	Our Docket No.	Class	Sub Class	Filing Date
ATT	BS	5,280,221	01/18/1994	Okamoto et al.				
MY	вт	5,747,926	05/05/1998	Nakamoto et al.			1	
AN	BU	6,198,225	03/06/2001	Kano et al.				
A70	вv	6,479,924	11/12/2002	Yoo				

#### FOREIGN PATENT DOCUMENTS

		Document Number	Date	Country	Class	)	Sub Class	Translation	Abstract
AN	вw	2675306	10/16/1992	FR					V
ATP	вх	2789221	08/04/2000	FR					١
ATP	BY	2789223	08/04/2000	FR			[.		V
Ano	BZ	10057072	05/23/2001	DE					· .
Are	CA	0 353 632	02/07/1990	EP				\	

#### OTHER DOCUMENTS

#### (Including Author, Title, Date, Pertinent Pages etc.)

	·	
AN	СВ	G. Benedek et al., "Electron Emission From Ferroelectric/Antiferroelectric Cathodes Excited by Short High-Voltage Pulses", Journal Applied Physics, Vol. 81, No. 3, 1 February 1997, pages 1396-1403
AN	CC	Gundel, H. et al., "Low Pressure Hollow Cathode Switch Triggered by a Pulsed Electron Beam Emitted From Ferroelectrics", Applied Physics Letter, American Institute of Physics, New York, US Vol. 54, No. 21, 22 May 1989, pages 2071-2073
ATP	CD	Gundel, H. et al., "Time-Dependent Electron Emission From Ferroelectrics by External Pulsed Electric Fields", Journal of Applied Physics, American Institute of Physics, New York, US Vol. 69, No. 2, 15 January 1991, pages 975-982
	1	

Examiner:	dis	Date Considered: 1/9/05

^{*}In accordance with the Notice dated July 11, 2003 on the PTO website, we are not enclosing copies of any of the above U.S. references.

# Notice of References Cited Application/Control No. | Applicant(s)/Patent Under Reexamination TAKEUCHI ET AL. | Examiner | Art Unit | Page 1 of 1

#### **U.S. PATENT DOCUMENTS**

*		Document Number Country Code-Number-Kind Code	Date MM-YYYY	Name	Classification
*	Α	US-6,614,149	09-2003	Kastalsky et al.	313/310
*	В	US-6,583,553	06-2003	Sasaguri, Daisuke	313/495
*	С	US-6,586,872	07-2003	Shibata, Masaaki	313/495
	D	US-			
	E	US-		·	
	F	US-			
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#### **FOREIGN PATENT DOCUMENTS**

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#### **NON-PATENT DOCUMENTS**

*		Include as applicable: Author, Title Date, Publisher, Edition or Volume, Pertinent Pages)
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*A copy of this reference is not being furnished with this Office action. (See MPEP § 707.05(a).)

Dates in MM-YYYY format are publication dates. Classifications may be US or foreign.